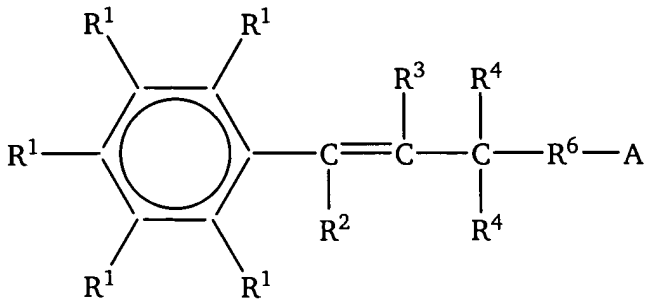
Claims:

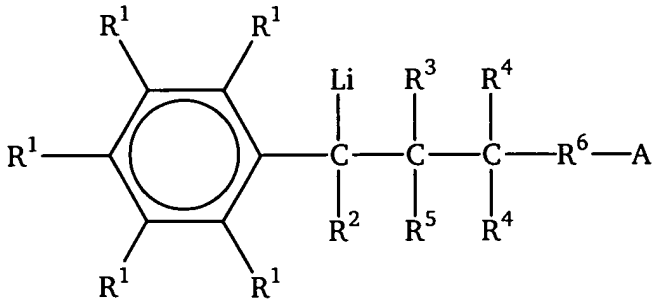
1. (Previously presented) A process for preparing a functionalized anionic polymerization initiator, the process comprising:

combining a functionalized styryl compound and an organolithium compound, where the functionalized styryl compound is defined by the formula X

(X) 

where each R^1 is independently hydrogen or a hydrocarbyl group, R^2 is hydrogen or a hydrocarbyl group, R^3 is hydrogen or a hydrocarbyl group, each R^4 is independently hydrogen or a monovalent organic group, R^6 is a covalent bond or a hydrocarbylene group, and A is a functional group.

2. (Previously amended) An anionic polymerization initiator defined according to the formula I:

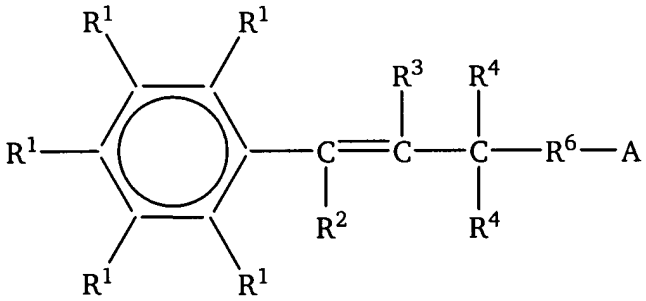
(I) 

where each R^1 is independently hydrogen or a hydrocarbyl group, R^2 is hydrogen or a hydrocarbyl group, R^3 is hydrogen or a hydrocarbyl group, each R^4 is independently hydrogen or a monovalent organic group, R^5 is a hydrogen atom or a hydrocarbyl group, where at least one of R^3 or R^5 is hydrocarbyl, R^6 is a covalent bond or a hydrocarbylene group, and A is a functional group selected from the group consisting of amine groups, phosphines groups, ether groups, thio ether groups, seleno groups, silyl groups, alkyl tin groups, and short-chain thermoplastic polymer segments.

3. (Previously presented) A polymer prepared by a process of comprising the steps of:

polymerizing monomer with an initiator that is prepared by combining a functionalized styryl compound and an organolithium compound, where the functionalized styryl compound is defined by the formula X

(X)



where each R^1 is independently hydrogen or a hydrocarbyl group, R^2 is hydrogen or a hydrocarbyl group, R^3 is hydrogen or a hydrocarbyl group, each R^4 is independently hydrogen or a monovalent organic group, R^6 is a covalent bond or a hydrocarbylene group, and A is a functional group.

4. (cancelled)

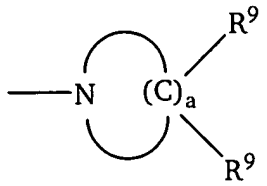
5. (Previously presented) The process of claim 1, where the functionalized styryl compound is N-(cinnamyl): -pyrrolidine, -3-methylpyrrolidine, -3,4-dimethylpyrrolidiene, -3,3-dimethylpyrrolidine,

-piperidine, -4- methylpiperidine, -3-methylpiperidine, -morpholine, -4-methylpiperazine, -4-ethyl-piperazine, -4-propylpiperazine, -hexamethyleneimine , -trimethylperhydroazepine, -azacyclotridecane, -azacyclohexadecane, -azacycloheptadecene, -trimethylazabicycloöctane, -perhydroisoquinoline, or -perhydroindole.

6. (Previously presented) The process of claim 1, where said step of combining combines about 0.8 mmol of the functionalized styryl compound with about 1.0 mmol of the organolithium compound.

7. (Previously presented) The process of claim 1, where step of combining occurs in the presence of about 1 to about 20 mmol of monomer in order to chain extend the initiator.

8. (Previously presented) The process of claim 1, where the functional group A is defined by the formula III

(III) 

where each R^9 is independently hydrogen or a monovalent organic group and a is an integer from 4 to about 18.

9. (Previously presented) The process of claim 1, where the functionalized styryl compound is prepared by combining a reactive styryl compound and a functionalized nucleophile.

10. (Previously presented) The process of claim 1, where the functionalized styryl compound is prepared by combining a reactive styryl compound and a functionalized electrophile.

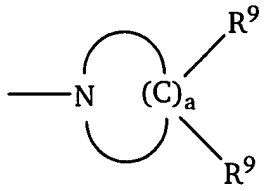
11. (Cancelled)

12. (Previously presented) The polymer of claim 3, where the functionalized styryl compound is N-(cinnamyl): -pyrrolidine, -3-methylpyrrolidine, -3,4-dimethylpyrrolidiene, -3,3-dimethylpyrrolidine, -piperidine, -4-methylpiperidine, -3-methylpiperidine, -morpholine, -4-methylpiperazine, -4-ethyl-piperazine, -4-propylpiperazine, -hexamethyleneimine, trimethylperhydroazepine, -azacyclotridecane, -azacyclohexadecane, -azacycloheptadecene, -trimethylazabicycloöctane, -perhydroisoquinoline, or -perhydroindole.

13. (Previously presented) The polymer of claim 3, where said step of combining combines about 0.8 mmol of the functionalized styryl compound with about 1.0 mmol of the organolithium compound.

14. (Previously presented) The polymer of claim 3, where step of combining occurs in the presence of about 1 to about 20 mmol of monomer in order to chain extend the initiator.

15. (Previously presented) The polymer of claim 3, where the functional group A is defined by the formula III

(III) 

where each R^9 is independently hydrogen or a monovalent organic group and a is an integer from 4 to about 18.

16. (Previously presented) The polymer of claim 3, where the functionalized styryl compound is prepared by combining a reactive styryl compound and a functionalized nucleophile.

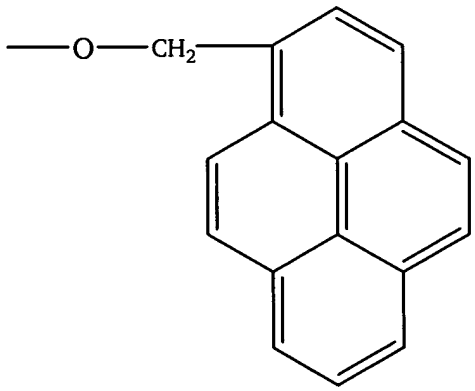
17. (Previously presented) The polymer of claim 3, where the functionalized styryl compound is prepared by combining a reactive styryl compound and a functionalized electrophile.

18-20 cancelled

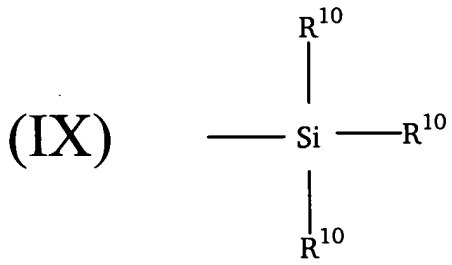
21. (Previously presented) A process for preparing a functionalized anionic polymerization initiator, the process comprising:

combining a functionalized styryl compound and an organolithium compound, where the functionalized styryl compound is N-(cinnamyl): -pyrrolidine, -3-methylpyrrolidine, -3,4-dimethylpyrrolidiene, -3,3-dimethylpyrrolidine, -piperidine, -4- methylpiperidine, -3-methylpiperidine, -morpholine, -4-methylpiperazine, -4-ethyl-piperazine, -4-propylpiperazine, -hexamethyleneimine , -trimethylperhydroazepine, -azacyclotridecane, -azacyclohexadecane, -azacycloheptadecene, -trimethylazabicycloöctane, -perhydroisoquinoline, or -perhydroindole.

22. (Currently amended) The anionic polymerization initiator of claim 2, where the functional group A ~~includes~~ is an ether group defined by the formula



23. (Currently Amended) The anionic polymerization initiator of claim 2, where functional group A ~~includes~~ is a silyl group defined by the formula IX



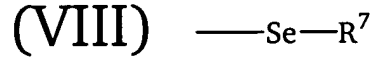
where each R^{10} is independently selected from the group consisting of a hydrocarbyl group ~~or~~ and an alkoxy group.

24. (Currently Amended) The anionic polymerization initiator of claim 23, where the functional group A is selected from the group consisting of trimethyl silyl, triethyl silyl, dimethoxy methyl silyl, and dimethyl methoxy silyl.

25. (Currently Amended) The anionic polymerization initiator of claim 2, where the functional group A is defined by the formula VII

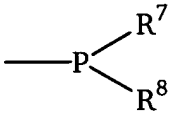
where R^7 is a hydrocarbyl group.

26. (Currently Amended) The anionic polymerization initiator of claim 2, where the functional group A is defined by the formula VIII



where R^7 is a hydrocarbyl group.

27. (Currently Amended) The anionic polymerization initiator of claim 2, where the functional group A is defined by the formula V

(V) 

where each R^7 and R^8 is independently a hydrocarbyl group.